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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,918	08/27/2003	Katsuhiko Miya	P/1250-258	5086
2352	7590	09/22/2006	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			MACARTHUR, SYLVIA	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/648,918	MIYA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sylvia R. MacArthur	1763	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-10 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 19-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

*The incorrect version of the claims was entered with this amendment. Applicant omitted the claim language addressed in the amendment of 3/27/2006, Applicant is urged to reintroduce the amendment with the correct version of claims.*

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 7-10, 19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyazaki (US 6,832,616).

Regarding claims 1, 3, and 19: Miyazaki teaches a substrate processing apparatus supplying a fluid to a rotated substrate for performing prescribed processing, comprising: A substrate holding/rotating element (rotating chuck 107/307), an atmosphere blocking member 105/305 that this planar shaped (described as a plate in col.2 line 45) and corresponds to the size of the wafer see Fig. 1, 3, and 4. The blocking members further comprises an inner and outer discharge port that are concentric/coaxially and thus anticipates the recitations of claim 1 of the present invention. Note the claim requires the

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inner gas discharge port be arranged eccentrically to the center of the substrate. This depends on the size of the substrate and the size of the inner discharge port. In a conventional showerhead or gas injection means such as a blocking member with a series of holes. At least one of the discharge ports will be eccentric to the center of the substrate, as evidenced by Ohba et al (US 5,522,412)

Regarding claim 7: The inner and outer discharge ports are arranged inside a support cylinder see Figs. 1,3, and 4.

Regarding claim 8: Col. 5 lines 25-34 cites that the ports discharge simultaneous so that their supplies can be mixed immediately.

Regarding claim 9: This is a process limitation and is not given patentable weight, as it does not require further structural limitation.

Regarding claims 10 and 21: See Figs. 1,3, and 4.

3. Claims 1,3-7, 19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Taniyama et al (US 6,247,479).

Regarding claims 1,3 and 19: Taniyama et al teaches a substrate processing apparatus supplying a fluid to a rotated substrate for performing prescribed processing, comprising: A substrate holding/rotating element (rotating chuck 10), an atmosphere blocking member 31 that is planar shaped (see Fig. 10) and corresponds to the size of the wafer see Fig. 1,3, and 4. The blocking member further comprises an inner and outer discharge port that are concentric/coaxially (see Fig.8) and thus anticipates the recitations of claim 1 of the present invention. Note the claim requires the inner gas discharge port be

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arranged eccentrically to the center of the substrate. This depends on the size of the substrate and the size of the inner discharge port. In a conventional showerhead or gas injection means such as a blocking member with a series of holes. At least one of the discharge ports will be eccentric to the center of the substrate, as evidenced by Ohba et al (US 5,522,412)

Regarding claim 4: This claim does not provide any structural limitation and is not given patentable weight as it is a process limitation. Nevertheless, Taniyama teaches the discharge ports are individually controlled according to col. 9 lines 14-31. The steps therein anticipate such a delay.

Regarding claim 5 This is a process limitation and is not given patentable weight, as it does not require further structural limitation.

Regarding claim 6: See Figs. 2 and 9-11

Regarding claim 7: Figs. 9-11 illustrate this recitation.

Regarding claim 21: See Figs. 2 and 9-11

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki or Taniyama et al in view of Matsuyama et al (US 6,514,570).

The teachings of Miyazaki and Taniyama et al were discussed above. Both fail to teach a inclined port.

Matsuyama et al teaches a solution processing apparatus wherein a nozzle is provided on an incline see Fig. 4B. The motivation to modify the apparatus of Miyazaki or Taniyama et al is that allowing the nozzle/port to incline provide more control of the treatment location when the port supplies the treatment fluid. Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide the nozzle or Miyazaki or Taniyama et al on an incline as taught by Matsuyama et al in order to provide better control of the supply of treatment fluid.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1,3-10, and 19-21 have been considered but are moot in view of the new ground(s) of rejection.

The prior art of Miyazaki and Taniyama et al both were introduced to teach an atmosphere blocking member comprising inner and outer discharge ports. They both anticipate this recitation as they are illustrated as coaxial and concentric to one another. Note the claim requires the inner gas discharge port be arranged eccentrically to the center of the substrate. This depends on the size of the substrate and the size of the inner discharge port. In a conventional showerhead or gas injection means such as a blocking member with a series of holes. At least one of the discharge ports will be eccentric to the center of the substrate, as evidenced by Ohba et al (US 5,522,412). It is recommended that the claim recite that a "single" inner gas discharge port is arranged eccentrically to a center as the specification and figures only support a single port and not a plurality in this case

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the term “an” is not narrowly recited as a single and thus the claim must be positively recited to claim a single. Furthermore the outer gas discharge port should be recited as “continuously” and annularly. These two amendments to the claims are recommended as they are supported in the specification and the figures and have not been taught or fairly suggested by the prior art of record.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the hours of 8:30 a.m. and 5 p.m..


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ram Kackar  
Acting SPE

  
RAM N. KACKAR, P.E.  
PRIMARY EXAMINER

  
Sylvia R MacArthur  
Patent Examiner  
Art Unit 1763

September 18, 2006